

ABSTRACT OF THE DISCLOSURE

Methods for identifying modulators of nuclear hormone receptor function comprise the steps of (a) forming a mixture comprising a nuclear hormone receptor, a peptide sensor and a candidate agent, but not a natural coactivator protein of the receptor, wherein the sensor provides direct, in vitro binding to the receptor under assay conditions; (b) measuring an agent-biased binding of the sensor to the receptor; and (c) comparing the agent-biased binding with a corresponding unbiased binding of the sensor to the receptor. In particular embodiments, the sensor comprises an amphipathic alpha helix nuclear hormone interacting domain comprising a recited nuclear hormone transcriptional coactivator motif sequence, the sensor is present at sub-micromolar concentration, the binding reaction occurs in solution, the sensor comprises a fluorescent label and the measuring step comprises detecting fluorescence polarization of the label. Reagents include labeled sensor peptides and reaction mixtures consisting essentially of nuclear hormone receptor, a peptide and a candidate agent.